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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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03/12/2004

Ching-Fu Hsueh

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04/04/2006

QUINTERO LAW OFFICE
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EXAMINER

MAI, ANH T

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1) ☒ Responsive to communication(s) filed on 25 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1,4,5,8-13 and 16 is/are rejected.

7) ☐ Claim(s) 2,3,6,7,14 and 15 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. in view of Wantanabe and further in view of Ghiringhelli [4016477].

Kimura discloses a coupling core 12; a first winding 2 around the core; a first bobbin 10 disposed between the first winding and the core; a plurality of second windings 41,42,43, separated from each other by separators disposed around exterior of the second bobbin 11, independent of each other and respectively winding around the exterior of the first winding 2, a second bobbin 11 disposed between the first winding and second winding [figure 6].

Kimura discloses the claimed invention except for magnetic core being iron core.

Wantanabe, however discloses the iron core 33,34 inserted into bobbins 16,22 [figure 1; abstract].

Because Kimura and Wantanabe are both from the same field of endeavor, the application of iron into magnetic core as disclosed by Wantanabe would have been recognized as pertinent art of Kimura.

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the apparatus as disclosed by Kimura with iron core as disclosed by

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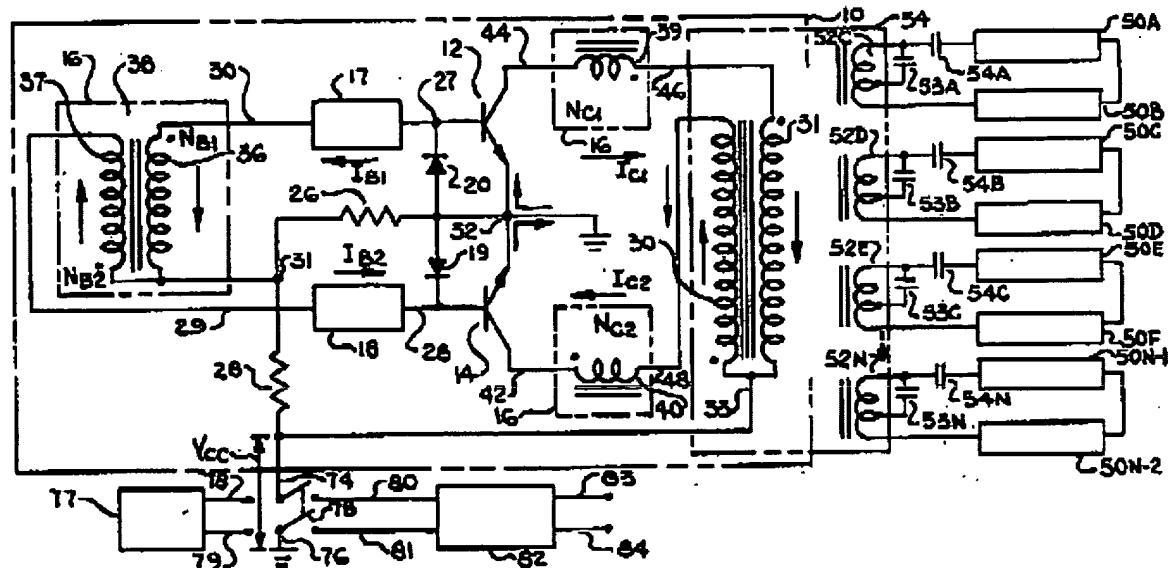
Watanabe for the purpose of providing alternate materials that are available to perform the mechanical/electrical requirement for the device.

With respect to limitation "the second windings have the same winding number", as disclosed by applicant in the specification page 8, lines 25-30, "according to Faraday's Law and Lenz's Law, even numbers of secondary windings use the same iron core and have the same winding number, so they have the same magnetic flux and direction. Thereby, current through the secondary winding for output is balanced automatically. It would have been obvious to have the same winding number as taught Faraday and Lenz laws for the reason stated above.

Kimura in view of Watanabe discloses the claimed invention except for each pair of the plurality of lighting tubes being connected in series and driven by one of the plurality of second windings.

Ghiringhelli discloses a plurality of lighting tubes 50A, 50B, 50C...50N-2, each pair connected in series and driven by one of second windings 52C, 52D, 52E, 52N [see fig 1].

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to have a pair of lighting tubes connected in series as taught by Ghiringhelli to Watanabe in view of Kumura for the purpose of optimize the output light of the lamps [col 5, lines 66].



3. Claims 5, 8-13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. in view of Watanabe further in view of Lin et al. and further in view of Ghiringhelli.

Kimura and Watanabe disclose the claimed invention as cited in rejection of claims 1-4.

Kimura and Watanabe do not disclose the first and second voltage signals of the first and second windings respectively.

Lin however, discloses a driving circuit to provide signal on the primary side of the transformer and secondary side to output AC signal which drives a plurality of lamp set Lp1 to Lp6 [figure 6, col 1, lines 58-64].

Because Kimura, Watanabe and Lin are from the same field of endeavor, the application of signal received from the first winding as disclosed by Lin would have been recognized as pertinent art of Kimura in view of Watanabe.

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to arrange the transformer as disclosed by Kimura in view of Watanabe

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with first voltage signal at the primary side and a second voltage signal generated by secondary winding for driving a plurality of lamp sets as disclosed by Lin to provide multi-lamp driving system which directly control the current balance among lamps [col 1, lines 53-55].

Kimura in view of Watanabe and further in view of Lin discloses the invention as claimed except for plurality of lighting tubes connected in series.

Ghiringhelli discloses a plurality of lighting tubes 50A, 50B, 50C...50N-2, each pair connected in series and driven by one of second windings 52C, 52D, 52E, 52N [see fig 1]. It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to have a pair of lighting tubes connected in series as taught by Ghiringhelli to Watanabe in view of Kumura for the purpose of optimize the output light of the lamps [col 5, lines 66].

With respect to claims 8, 16, Kimura discloses second windings 41,42,43, are separated from each other by separators disposed around exterior of the second bobbin 11 [figure 6].

With respect to claims 11, 13, Kimura discloses the lamps are discharge tube [col 1; lines 6-10].

Allowable Subject Matter

4. Claims 2-3, 6-7, 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2 and 6, 14 recite inter alia, *the plurality of second windings generates high voltage signals induced from the first winding and the third winding.*

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

Response to Arguments

5. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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**ANH MAI
PRIMARY EXAMINER**